

Response to EPA 308 request

Conference Call of June 6, 2012

1. Effluent sampling:

A. All EPA, March 22, 2012 letter originally requested parameters for chemical testing of effluent be included for sampling and testing:

1. Metals: iron, manganese, aluminum, vanadium
2. Specific conductance (Lab) OK
3. Cations: calcium, magnesium, sodium, and potassium
4. Anions: bicarbonate and phosphate
5. TDS (Lab) OK

PMM will add iron and manganese to its already comprehensive parameter list for its effluent sampling plan; however, we do not feel the other listed metals, cations and anions are appropriate parameters. Water quality standards have not been developed for these parameters and, thus, any analysis for these parameters is more applicable to a research project than a reasonable 308 request. PMM has provided extensive historical data on prior "research" projects that supports its proposed plan under this 308 request. PMM is confident that its proposed sampling plan, including the parameters to be analyzed, is conservatively scoped to fully address any concerns the Agency may have related to coal mining operations and is otherwise entirely consistent with other relevant states within the Region, most appropriately, Illinois. As you know, PMM's sampling plan includes analysis for additional parameters beyond those requested by EPA. Please confirm your interest in PMM proceeding with these additional analyses, or, to reduce costs, we will remove them from our sampling plan.

For the sake of clarity, we have prepared the table found at the bottom of this response to summarize the scope of sampling agreed to by PMM in response to Agency comments.

B. All metal sampling and analysis, as stated in our March 22, 2012 Section 308 letter, "must include methods for both dissolved and total metals." OK

C. Also as stated in March 22, 2012 letter, "Selenium analysis must use low level methods such that quantification level is 1.0 ug/L or lower." OK

D. Add Effluent location selection of NPDES outfall #054, which would bring total effluent sample locations to six.

Outfall 054 is an existing water impoundment remaining from a previous mining operation. It is planned to be used as a NPDES outfall; however, operations have not begun in the watershed of 054 and is not planned to begin during the timeframe of this sampling plan. Outfall 053 located just north of 054 and included as an effluent sampling location will provide the best data for active mining, as extensive pit

development and mining is occurring in the watershed of 053. Outfall 054 would not be useful.

2. Biological & Physical Habitat Sampling:

A. Add another sample location for biological and physical habitat sampling, that of downstream of NPDES outfall #054, this inclusion would bring the total of sample locations for biological and physical habitat to three.

PMM controls enough property downstream of 054 to conduct the biological and physical habitat sampling in the receiving stream and will add this location to it's sampling plan.

PMM can initiate the sampling plan the week of June 11, 2012 with sampling of base flows or precipitation induced discharges if either are present at the relevant outfalls.

308 Request	1st Peabody Proposal	2nd Peabody Proposal
Cations		
calcium		
magnesium		
sodium		
potassium		
Anions		
chloride	chloride	chloride
sulfate	sulfate	sulfate
bicarbonate		
phosphate		
Total Metals		
aluminum		
cadmium	cadmium	cadmium
chromium	chromium	chromium
iron		iron
manganese		manganese
mercury*	mercury	mercury*
selenium*	selenium	selenium*
vanadium		
zinc	zinc	Zinc
	antimony	antimony
	arsenic	arsenic
	beryllium	beryllium
	copper	copper
	lead	lead

	nickel	nickel
	silver	silver
	thallium	thallium
Dissolved Metals		
aluminum		
cadmium		cadmium
chromium		chromium
iron		iron
manganese		manganese
mercury*		mercury*
selenium*		selenium*
vanadium		
zinc		Zinc
WQ Indicator Parameters		
pH	pH (field)	pH (field)
TDS	TDS (lab)	TDS (lab)
SpC		SpC (lab)
	acidity	acidity
	alkalinity	alkalinity
	hardness	hardness
	TSS	TSS

Notes:

* Low level method

These constituents were not requested by EPA and can be removed from the list.